

Chapter 15

Validity and Reliability Evidence of a New Version of the Internet Self-Efficacy Scale

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ABSTRACT

The introduction of the theory of self-efficacy has had a profound impact on people in the academic arena. Its applications are like a wild-fire that has spread from one disciplinary area to the other. As such, various self-efficacy instruments have been developed and applied to various domain areas. Like all other disciplinary fields, the information technology field was affected as well. First, there was the computer self-efficacy scale developed by Murphy, Coover, and Owen (1989) and then the internet self-efficacy scale proposed by Eastin and LaRose (2000).

Applying the Internet self-efficacy scale, many studies have found significantly positive relationships between the Internet self-efficacy and behaviors under various settings. However, some late empirical research has failed to support the strongly positive correlations involving the Internet self-efficacy (Mbengue & Hsu, 2006; Hsu, 2009). This might be attributed to two factors: self-efficacy is, as Bandura (2006) indicated, a context-specific and/or domain specific, and the out-of-date of the earlier Internet self-efficacy scales due to a drastic advancement of the Internet technology.

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The purpose of the research was designed to bridge the gap and to update the Internet self-efficacy scale. Based on a sample of 1123 college students with 10 different majors in the northern, central, and southern portions of Taiwan, a new Internet self-efficacy scale based on 26 items was developed and validated statistically. The new version of the Internet self-efficacy scale was composed of five domains including blogs, auction, video sharing, photo albums, and wiki. Detailed evidence of the reliability and factorial analytic work were presented and suggestions for the future research were also discussed.

INTRODUCTION

The theory of self-efficacy was originally introduced and conceptualized by Bandura (1977). It is an important concept to help individuals understand how quickly they are capable of adopting new tools to help develop skills required by work that might previously be off limit to them earlier. Self-efficacy relates to one's own perception about his/her capability to perform a certain task (Bandura, 1977). An individual who will make an effort to deal with a given situation depends, to a large extent, on the strength of his/her beliefs. Self-efficacy, according to Gist and Mitchell (1992), is expected to affect one's effort, commitment, and persistence. The higher the self-efficacy a person has, according to Oliver and Shapiro (1993), the better chance that person will have to succeed in a given task. Conversely, the lower the self-efficacy he/she has, the better chance that person will fail. Studies have shown that individuals with a high self-efficacy tend to perform better than those with a low self-efficacy because the perceived capabilities can significantly affect their willingness to engage in higher challenging tasks and their performance when everything else is being equal (Bandura, 1982; Mentro et al., 1980).

Bandura (1977, 1986) suggests that expectations of personal efficacy can come from four different sources of information: namely, performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Individuals often evaluate their capabilities in terms of those four sources of information before

determining what choices to make and how much effort to put in. Individuals may also compare their own capabilities against others. Self-efficacy is normally composed of three components including magnitude, strength, and generality. The magnitude portion is related to the levels of task difficulty perceived by them in order to perform such a task. The strength aspect of the self-efficacy is associated with a conviction connecting to the magnitude. As far as the generality is concerned, it is the degree to which the expectation is generalized across situations. The purpose of the assessment of the three components is intended to help explain and predict the dispositions, intentions, and actions of a person. Self-efficacy is a dynamic construct that can change from time to time depending upon whether a person has acquired new information, experience, or skills.

Ever since the introduction of the concept, it has continuously gained its popularity and its practice had been rapidly proliferated. Actual applications of the concept of self-efficacy have been extended from the general self-efficacy (Schwarzer, 1992) to a wide variety of domains, including, but not limited to, career decision-making self-efficacy (Taylor & Betz, 1983), computer self-efficacy (Murphy, Coover, & Owen, 1989; Compeau & Higgins, 1995; Marakas et al., 1998), condom self-efficacy (Lawrence et al., 1990), creative self-efficacy (Tierney & Farmer, 2002; Beghetto, 2006), COPD self-efficacy (Wigal et al., 1991), diabetics management self-efficacy (van der Bijl, 1999), drug avoidance self-efficacy (Martin, 1992), exercise self-efficacy (Benisovich, et al.,

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